AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (amended): A method of automatically registering a domain name in a network to which a host belongs, the method comprising:

(a) receiving name information of a network having a host;

(b) creating a link local address of the host and determining whether the created link local address has already been used;

(c) if the created link local address has not been used, extracting an interface ID used to determine the host, from the created link local address;

(d) creating a domain name using the extracted interface ID and the received name information of the network; and

(e) registering the created domain name in a domain name server.

(a) creating a link local address of the host and extracting from the link local address an interface ID that is used to identify the host from other hosts if the created link local address is not in use; and

(b) creating a domain name using the interface ID and name information of the network to which the host belongs and registering the domain name in a domain name server.

2. (amended): The method of claim 1, further comprising:

(f) receiving the created domain name through a message; and

2

(g) if the created domain name is already present in the domain name server, notifying the host of a presence of the created domain name so that a new domain name is created. wherein the creating the domain name comprises; transmitting to the domain name server the created domain name with a predetermined first message; and

generating a new domain name if the domain name has already been in the domain name server and a predetermined second message indicating the presence of the domain name in the domain name server is received.

3. (amended): The method of claim 2, wherein in step (f), the created domain name is received through a neighbor solicitation (NS) message. the created domain name is transmitted to the domain name server with a neighbor solicitation (NS) message.

4. (amended): The method of claim 2, wherein in step (g), if the created domain name is already present in the domain name server, the presence of the created domain name is recorded to a neighbor advertisement (NA) message, and the NA message is transmitted to the host to control the host to create a new domain name. the predetermined second message indicating the presence of the domain name is received from the domain name server with a neighbor advertisement (NA) message.

5. (amended): The method of claim 1, wherein the name information of the network corresponds to a suffix of the domain name of the network having the host. to which the host belongs.

6. (amended): The method of claim 5, wherein in step (d), "interface ID.suffix" is created as the domain name, wherein "interface ID" corresponds to the extracted interface ID.

3

7. (amended): The method of claim 1, wherein in ~~step (a)~~, the name information of the network to which the host belongs is received ~~through~~ with a router advertisement (RA) message.

8. (amended): The method of claim 1, wherein ~~in step (b),~~ in the creating of the link local address of the host and extracting the interface ID, it is determined whether the created link local address has already been used using duplicate address detection (DAD).

9. (amended): The method of claim 1, wherein ~~in step (c),~~ in the creating of the link local address of the host and extracting the interface ID, a lower 64 bits of the created link local address, except for its prefix, is extracted as the interface ID.

10. (original): The method of claim 1, wherein the host is an IPv6 host.

11. (amended):A system of automatically registering a domain name, the system comprising:

a host, which receives name information of a network to which the host belongs, creates a domain name using an interface ID that is used to identify the host from other hosts and the name information of the network, and outputs the created domain name; and

an auto-registration server, which transmits the name information of the network to the host, receives the created domain name, and registers the created domain name in a domain name server.

12. (amended):The system of claim 11, wherein the host comprises:

a link local address creating unit, which creates a link local address of the host;

an interface ID extracting unit, which receives the created link local address and extracts

an interface ID from the received link local address; and

a domain name creating unit, which creates a domain name using the extracted interface

ID.

13. (amended): The system of claim 12, wherein the link local address creating unit

creates the link local address of the host, determines whether the created link local address is

~~already present in the domain name server~~ in use using duplicate address detection (DAD), and

~~if the created link local address is already present in the domain name server,~~ creates a new link

local address if the created link local address is in use.

14. (original): The system of claim 12, wherein the interface ID extracting unit extracts

the lower 64 bits of the created link local address, except for a prefix, as the interface ID.

15. (amended): The system of claim 11, wherein the auto-registration server comprises:

a network name information transmitting unit, which transmits the name information of

the network to the host;

a domain name managing unit, which receives the domain name, registers the received

domain name in a domain name server, and if the received domain name is already present in the

domain name server, notifies the host that the received domain name is already present in the

domain name server; and

a domain name information storing unit, which stores the registered domain name

information for a predetermined amount of time.

16. (amended): The system of claim 15, wherein the network name information

transmitting unit transmits the name information related to the network ~~through~~ with a router

advertisement (RA) message.

17. (amended): The system of claim 15, wherein the domain name managing unit

receives the created domain name ~~through~~ with a neighbor solicitation (NS) message and ~~if the~~

~~received domain name is already present in the domain name server, records the presence of the~~

~~received domain name to a neighbor advertisement (NA) message, transmits the NA message to~~

~~the host in order to control the host to create a new domain name.~~ transmits information on the

presence of the received domain name with a neighbor advertisement (NA) message to allow the

host to create a new domain name.

18. (original): The system of claim 11, wherein the host is an IPv6 host.

19. (amended): A computer readable recording medium having embodied thereon a

method of automatically registering a domain name of a network to which a host belongs,

wherein the method comprises:

(a) ~~receiving name information of a network having a host;~~

(b) ~~creating a link-local address of the host and determining whether the created link~~

~~local address has already been used;~~

(c) ~~if the created link-local address has not been used, extracting an interface ID used to~~

~~determine the host from the created link-local address;~~

(d) ~~creating a domain name using the extracted interface ID and the received name~~

~~information of the network; and~~

~~(e) registering the created domain name in a domain name server.~~

(a) creating a link local address of the host and extracting from the link local address an interface ID that is used to identify the host from other hosts if the created link local address is not in use; and

(b) creating a domain name using the interface ID and name information of the network to which the host belongs and registering the domain name in a domain name server.